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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/604,661
Filing Date: August 07, 2003
Appellant(s): TERAN, JR. ET AL.

Jerome R. Drouillard
Dickinson Wright PLLC
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 3/2/2009 appealing from the Office action mailed 7/14/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2002/0179031	Slopsema et al.	12-2002
4,364,343	Malik	12-1982
6,499,455	Page et al.	12-2002
2004/0262995	Hawkins	12-2004
2003/0056753	Fukushima et al.	3-2003
2002/0157881	Bakholdin et al.	10-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- The specification fails to describe the term "non-idle air valve related function". The term "non-idle air valve related function" is not one ordinarily used in the art. The term "non-idle air valve related function" will be examined as best understood to mean any function other than the systems normal idle air flow position.
- Claim 1 recites the system limited to "non-hybrid" vehicles and further limited to an "internal combustion engine", neither limitations being provided in the specification or the original claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole

would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slopsema et al. (US 2002/0179031 A1) and Malik (US 4,364,343).

Slopsema et al. (hereinafter referred to as Slopsema) teaches:

In regard to Claim 1

- A vehicle shutdown system for a non-hybrid vehicle having an internal combustion engine (See Paragraph 10).
- An ignition enabling device (32) with an on and off state which enables ignition of the engine (See Figures 1 and 2 & Paragraph 11).
- An engine controller (20) having a plurality of functions (See Paragraph 13) and being coupled to the ignition enabling device (32) (See Figure 1).
- The engine controller (20) temporarily maintaining operation of at least a portion of the controller functions when the ignition enabling device is switched to the off state, the controller functions comprising a non-idle air valve related function, read on by step (56) of Figure 2 in which the throttle is adjusted to substantially reduce airflow (See Paragraphs 15-17).

Slopsema fail to teach a switch coupled to the ignition-enabling device and a fuel supply system wherein the controller also disables the fuel supply system upon the ignition enabling device being switched off.

Malik teaches a switch coupled to a controller (110), read on by the manual shutdown switch (139) (See Column 6, lines 54-63) and Figure 1 and a fuel supply system disabled by a controller when the ignition is switched off (See Column 8, Line 67 to Column 9, Line 25 and Column 7, Lines 25-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the switch and fuel supply disabling system taught by Malik into the vehicle shutdown system taught by Slopsema. The motivation would have been to reduce fuel consumption and emissions (See Malik, Column 1, Lines 1-25).

Slopsema further teach:

In regard to Claims 2 & 13

- The plurality of functions comprising at least drive-by-wire function (See Paragraph 5 & Figure 1).

In regard to Claims 3

- A single throttle-controlled device, read on by the throttle (Step 56), the engine controller (20) electronically controlling the non-idle air valve throttle controller device at least temporarily preventing shutdown of electronic throttle control (Step 58) when the ignition-enabling device (32) is switched off (Step 52) (See Figure 2) in order to reduce noise and vibration (shudder) during engine shutdown (See Paragraphs 3-4).

In regard to Claim 10

- The controller adjusts a position of the throttle controlled device to be more air flow restrictive, without closing off the flow of air, than that of said throttle-controlled device in a default position when the ignition-enabling device (32) is switched off (See Paragraphs 15-17).

Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slopsema et al. in view of Malik in further view of Page et al. (US 6,499,455).

In regard to Claim 5

Slopsema teaches the engine controller (20) enabling devices when the ignition enabling device is in an ON state and at least temporarily disabling components when the enabling device is in an OFF state (See Figure 2 & Paragraphs 15-18) but fails to explicitly teach a switch coupled to the controller for performing this function.

Page et al. teaches a drive by wire system utilizing a power switch, relay (58), in which to control an air control valve (42) (See Column 2, Lines 61-65). Page et al. further teaches the switch (58) being closed when the ignition switch is closed and temporarily preventing disablement of the switch when the ignition switch is turned off (See Column 3, Lines 12-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the throttle control taught by Page et al. into the vehicle shutdown system taught by Slopsema utilizing a relay and temporarily maintaining the relay in the closed position when the ignition switch is put in the off position. The motivation would have been to provide a

control means well known in the art for controlling the air control valve in which Slopsema is silent (See Slopsema, Paragraph 16).

In regard to Claim 7

Slopsema teaches controlling a throttle position (See Paragraph 11) but fails to explicitly teach a throttle position sensor. Page et al. teaches a sensor, read on by circuit (78), that senses the transition of voltage which causes an actuator to adjust or maintain an air control valve at a predetermined open position (See Column 4, Lines 32-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the throttle actuator position sensor taught by Page et al. into the vehicle shutdown system of Slopsema. The motivation would have been to provide a reliable and accurate control means for the throttle not explicitly taught by Slopsema.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slopsema et al. in view of Malik in further view of Hawkins (US 2004/0262995A1).

Incorporating all arguments above, Slopsema teaches an "ignition status" signal (32) (See Figure 1) but fails to explicitly teach an ignition start key assembly.

Hawkins teaches an ignition start key assembly (5) attached to a controller (62) used to control the engine of a vehicle (See Paragraphs 23-26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ignition start key assembly taught by Hawkins into the vehicle

shutdown system of Slopsema. The motivation would have been to secure the ignition from unauthorized use by use of the key and a device well known and utilized in the automobile industry for controlling the ignition of a vehicle.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slopsema et al. in view of Malik in further view of Fukushima et al. (US 2003/0056753 A1).

Slopsema teaches a throttle adjusted for less than 10 percent of the idle speed flow rate but fails to explicitly teach a throttle angle of 1-2 degrees, approximately 1.5 degrees.

Fukushima et al. (hereinafter referred to as Fukushima) teaches an engine throttle control in which the engine throttle is set to 2 degrees (See Paragraphs 113-115).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to set the throttle position of Slopsema in order to restrict the air flow as desired. The motivation would have been to obtain a desired decrease in air flow as taught by Slopsema and to prevent the valve from sticking (See Fukushima, Paragraph 113).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slopsema et al. in view of Malik in further view of Bakholdin et al. (US 2002/0157881)

Incorporating all arguments above of the vehicle shutdown system taught by Slopsema et al., Slopsema fails to teach a safety monitor which monitors the states of the system during shutdown.

Bakholdin et al. teaches a safety monitor as part of CPU (332) (See Paragraph 120) in which during shutdown of the engine, the states are monitored for a fault and the system continues to operate unless the fault exceeds a predetermined severity level.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the safety monitor taught by Bakholdin et al. in which to monitor the shut-down taught by Slopsema in which the operational status of the various devices were monitored, as taught by Bakholdin et al.

The motivation would have been to protect the system and it's occupants by identifying dangerous conditions during shutdown.

(10) Response to Argument

The Appellant Argues:

(1) The meaning of the term "non-idle air valve related function" is clear from the specification, drawings and claims as originally filed.

(2) The term "non-hybrid" and "internal combustion engine", although not provided in the original specification, should be allowed to remain in the claims since a lengthy examination has been performed and the likelihood of confusion is low given the Examiner's demonstrated facility with the meaning of the claims.

(3) Slopsema does not teach controlling "a non-idle air valve related function" since Slopsema teaches only one throttle and therefore, it must be, by definition, an idle air control throttle and not a "non-idle air valve related function".

In regard to argument 1

The Examiner asserts that the term "non-idle air valve related function" is unclear. The Appellant has not defined the term "non-idle air valve related function" in the specification nor does the term appear in the drawings or claims as originally filed. Furthermore, the term "non-idle air valve related function" is not an ordinary term in the art making it unclear exactly what encompasses "non-idle air valve related functions". Although Appellant has provided some examples of what the term "non-idle air valve function" may comprise in his arguments referring back to the specification, the term itself, as presented in the claims, still lacks clarity and sufficient support since the term was never defined in the original disclosure.

In regard to argument 2

The Appellant has agreed that the invention was not originally disclosed as limited to a "non-hybrid vehicle" and "internal combustion engine". Since the original disclosure lacks enablement for the invention limited to a "non-hybrid vehicle" and "internal combustion engine", the Examiner is not persuaded by Appellant's argument that the limitations should remain in the claims on the grounds that an examination has been performed on these terms.

In regard to argument 3

Since the term "non-idle air valve related function" is not an ordinary term in the art nor does the Appellant provide a disclosure of the term, the Examiner has examined the limitation using the plain meaning of the terms. The term was rejected under Slopsema et al. (hereinafter referred to as Slopsema) who teaches controlling a throttle position after shutdown (ignition turned off)

wherein the vehicle throttle is adjusted to a position different than that of a position at idle (see step 56, Figure 2). First, the vehicle of Slopsema is at shutdown. The ignition has been turned off (steps 51, 52, Figure 2), and therefore **the vehicle is not at idle**. Therefore, the control of the throttle **after shutdown** reads on a "non-idle air valve related function" since a vehicle after shutdown is not at idle and therefore functions performed after shutdown are "non-idle" thereby reading on "non-idle air valve related functions". Furthermore, the throttle is controlled at a position different than that of a throttle position at idle thereby making the control a "non-idle air valve related function". Slopsema teaches: "the throttle is adjusted for less than about twice the idle speed flow rate, more preferably less than about twice the idle speed flow rate, more preferably less than about the idle speed flow rate, more preferably less than about 30 percent of the idle speed flow rate and most preferably less than about 10 percent of the idle speed flow rate" (see Slopsema Specification, paragraph 16). Since the throttle is adjusted to a position different than that of a position "at idle", the throttle control of Slopsema further reads on a "non-idle air valve related function". The Examiner does not agree with Appellant's argument that the term "non-idle air valve related function" is so narrow as to exclude any throttle control. As stated above, throttle control at shutdown (and not during an idle state) and furthermore throttle control at a position and function different than that of an idle throttle position (both taught by Slopsema) properly read on the limitation "non-idle air valve related function".

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Daniel Cavallari

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TQAS TC 2800

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